Helping Massachusetts Municipalities Create a Cleaner Energy Future

COMMONWEALTH OF MASSACHUSETTS

Deval L. Patrick, Governor
Richard K. Sullivan, Jr., Secretary
Mark Sylvia, Commissioner

Qualified Energy Conservation Bonds (QECBs)

Elise Avers, Clean Energy Fellow (DOER)
&
Rebecca Sullivan, First Vice President (MassDevelopment)

Webinar

November 17, 2011

11:00 AM

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Introduction: Green Communities Division

Meg Lusardi

Director

Green Communities Division

Green Communities Division

Serves as the hub for all Massachusetts cities and towns on energy matters

Helping Massachusetts Municipalities Create A Cleaner Energy Future

Green Communities Division Programs & Resources for Municipalities

- Green Communities Grant and Planning Assistance Program
- MassEnergyInsight energy tracking and analysis tool
- Municipal Energy Efficiency Program
- Energy Management Procurement Assistance
- ARRA stimulus funding
- Website filled with tools & resources for municipalities
  www.mass.gov/energy/greencommunities
- Email updates via listserv – Sign up today by clicking on:
  http://www.mass.gov/eea/energy-utilities-clean-tech/green-communities/subscribe-to-green-communities-email-updates.html

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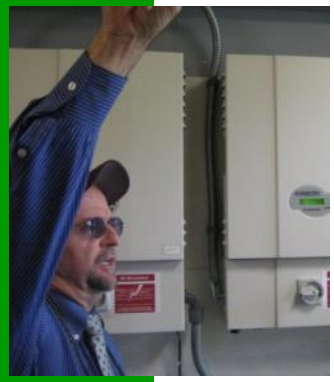
Outreach - Regional Coordinators

- Regional Coordinators act as direct liaisons with cities and towns on energy efficiency and renewable energy activities
- Located at each of the DEP Regional Offices:



SERO – LAKEVILLE: Seth Pickering
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CERO – WORCESTER: Kelly Brown
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Jim.Barry@state.ma.us

Massachusetts DEPARTMENT OF ENERGY RESOURCES

Helping Massachusetts Municipalities Create A Cleaner Energy Future

DOER Massachusetts Department of Energy Resources

Recording & Presentation

- The webinar is being recorded and will be available on our website in approximately 48 hours at: www.mass.gov/energy/greencommunities
- The slide presentation will also be posted at: www.mass.gov/energy/greencommunities
- Websites are also listed at end of presentation

Qualified Energy Conservation Bonds Presentation Outline

1. Overview of QECBs
2. History of QECBs
3. Bond Mechanics
4. Types of Qualified Projects
5. Case Study 1: Town of Belchertown
6. Case Study 2: Town of Gill
7. How to Apply
8. Questions and Answers

What are QECBs and how do they work?

Rebecca Sullivan

First Vice President

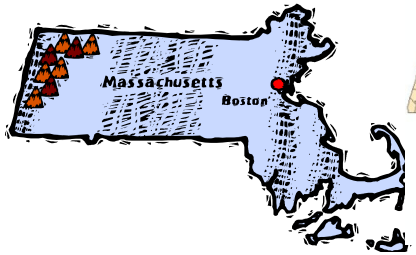
Massachusetts Development Finance Agency

Overview

A Qualified Energy Conservation Bond or "QECB" is a bond issued by a state or local government to finance one or more "qualified energy conservation purposes."

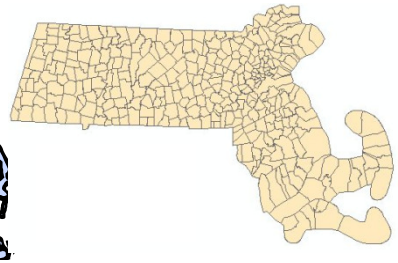
Definitions:

U.S. Treasury provides an allocation to all 50 states for these bonds



Massachusetts makes further **allocations** by reviewing projects for eligibility and **awards** a share of the allocation to public entities for energy projects

"Allocating the bond"



The public entity awardee (municipality, regional school district, etc.) is both the **borrower and the issuer** of this bond, who must **issue** the bond to an investor within 6 months of award.

"Selling the bond"
"Issuing the bond"

The investor (often a bank) becomes the **bond holder**. The investor can either receive a tax credit for holding this bond and providing a loan for the project, or the issuer can receive direct subsidy payments to offset bond interest.

"*Buying the bond*"

The public entity arranges a loan for this energy project from the investor.
The funds must be repaid to the investor before **bond maturity.**

GREEN COMMUNITIES
Massachusetts DEPARTMENT OF ENERGY RESOURCES

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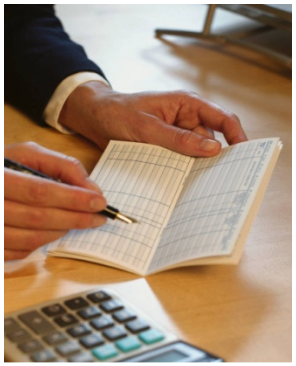
Massachusetts Department of Energy Resources

Overview (cont'd)



QECBs can be issued in two ways:

1.) By providing a federal income tax credit to the bond holder (investor).

2.) As a taxable bond with a federal direct subsidy payment to the issuer (borrower). <u>This is the most common method of issuing a QECB</u>.

- → Issuer pays a higher interest rate to the bond holder than in option #1
- → Issuer must file quarterly to the Treasury to receive direct payments for the 70% interest rate subsidy.

Why might a public entity issue a QECB?

Using a QECB allows municipal issuers to obtain a very low rate of financing for their energy projects. The federal income tax credit or direct payment subsidy results in the Federal government paying a significant portion of the interest on their loan. This results in a significantly lower net interest rate than other borrowing mechanisms available for these types of projects.

History

The Energy Improvement and Extension Act of 2008 (EIEA)

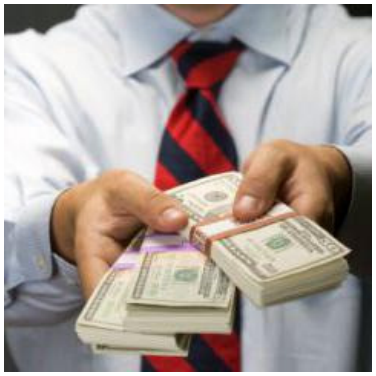
→ Establishes QECBs as tax credit bonds.

American Recovery and Reinvestment Act of 2009 (ARRA)

→ Increases QECBs from $800 million to a total of $3.2 billion.

Hiring Incentives to Restore Employment Act of 2010 (HIRE)

→ Introduced option to recoup part of interest issuers pay on QECBs through a direct subsidy from the U.S. Treasury rather than tax credit to the bond holder.



Poll Question 1

We would like to know our audience, are you a:

a) Municipal official
b) Energy manager or energy/climate committee member
c) A representative from an energy service company
a) Other town or school official or volunteer
b) Other

Bond Mechanics

- QECBs are not grants. The principal balance must be repaid
- The U.S. Treasury either 1.) subsidizes the taxable interest rate or 2.) offers a tax credit to investors.
  - → Treasury provides rebate of 70% of the maximum interest rate that is determined on the date of closing or actual interest paid.
  - → As of today, the Treasury base rate is 4.91% and the max subsidy is 3.44%
- To get the best interest rate, work with a financial advisor to sell as a general obligation bond. Interest rates based on bond credit rating.
- Issuers must work with Bond Counsel and we would advise engaging them early in the process.
- Typical interest rates we are seeing for public projects 0.5%-1.5%
  - → As with all project borrowings, interest rates will differ based upon market conditions, term and credit rating.

Bond Structure

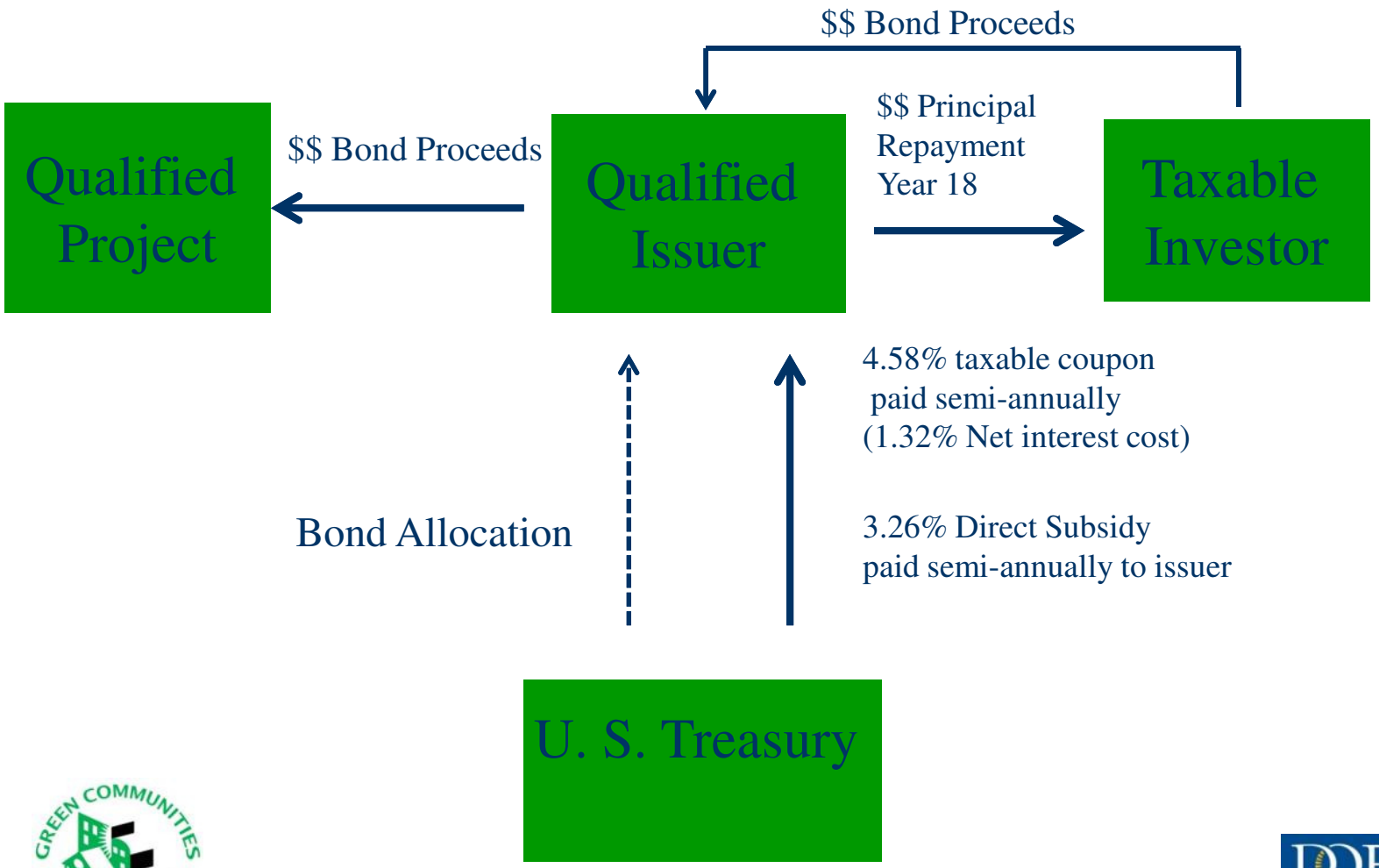
(Based on Subsidy Direct Payment Option)

- Bond can issue as a "bullet" (with full payment at maturity)
  - → Sinking fund with annual payments to prepare for repayment
  - → Can invest this $$, interest permitted yield is capped at 3.92% (as of 11/15/11)
- Bond terms limits are 19 years (as of 11/15/11), set monthly by Treasury
- Bond issuance fees. Only 2% of bond proceeds can be used.

Taxable Bond w/Coupon Payments
Issuer sells taxable bonds and pays a taxable coupon semi-annually to the investor.

Subsidy Rate
Issuer receives from U.S. Treasury the lesser of the: taxable rate on the bonds or 70% of the Tax Credit Rate (as of bond sale date).

Direct Payment Subsidy
QECB Issuance Example



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Types of Qualified Projects

Most Typical Projects:

- Energy efficiency upgrades in public buildings (min. 20% energy reduction)
- Renewable energy production – Wind, Solar, Biomass, etc.
  → Any facility eligible for the production tax credit under Section 45 IRS code
- Implementing green community programs (loans, grants, etc.).

Other examples of eligible projects include:

- Supporting research in advanced energy technologies or alternative fuel development
- Improving or adding to an existing renewable energy installation
- Demonstration projects to promote commercialization of green technologies or advanced battery technologies

Poll Question 2

What type of energy project are you considering using a QECB to finance?

a) Renewable energy generation
b) Energy efficiency to lower usage by 20% in public buildings
c) Green Community program
d) Other

Case Studies: How have Massachusetts communities used QECBs for energy projects?

Elise Avers

Program Coordinator,
Green Communities Division

Massachusetts
Department of Energy Resouces

Case Study: Town of Belchertown

Project Timeline:

September 2009: RFP issued to solicit energy service companies

December 2009: Siemens selected as winning bidder

December-May 2010: Siemens assembles an investment grade audit to help Belchertown identify potential energy saving improvements

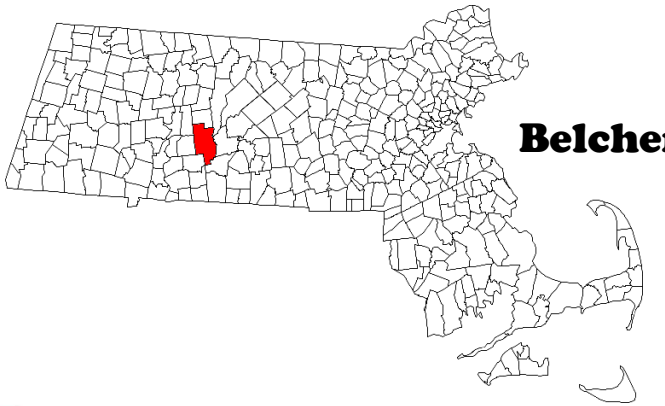
May 2010: Town meeting approval for borrowing authorization

June 3, 2011: Awarded a QECB of $3.1 million to finance a $3.3 million energy efficiency project that reduces energy consumption by 20%

June 13, 2011: Belchertown signs contract with Siemens for comprehensive energy performance contract including schools and municipal buildings

July 1, 2011—Current: Construction underway

October 2011: QECB issued via public market (Federally Taxable Direct Payment)



Belchertown, Population 14,649

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Case Study: Town of Belchertown (cont'd)

QECB Details:

- Town opts to receive quarterly direct payment subsidies, where Belchertown receives 70% of bond interest costs directly from U.S. Treasury
  - → More onerous, but may result in lower net interest rate to the Town.
- QECB sold through negotiated sale with a bond underwriter (RBS Capital Markets) who sold the issue in 3 parts to investors and provided loan $$ to the Town.
- Bonds were sold at a rate of 4.58%
- Bond issuance fees approx. 2.35% of QECB

→ **Net interest cost of 1.32% to Belchertown over a term of 18 years (after 70% subsidy)**

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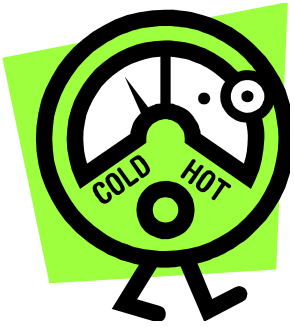
Case Study: Town of Belchertown (cont'd)

This energy project ....

Consists of heating system upgrades, installation of programmable thermostats and energy management systems, lighting improvements, and insulation and weatherization.

Allows Belchertown schools and town buildings, like the Town Hall and the Fire Station, to use 20% less energy

Yields over $200,000 in annual energy cost savings to the community



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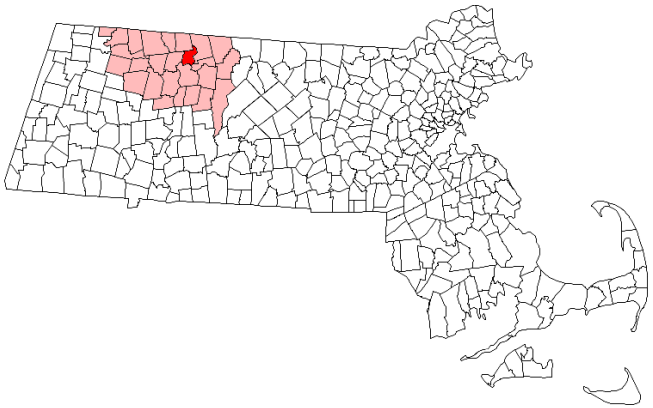
Poll Question 3

Does your community have experience with issuing municipal bonds?

a) Yes, we issued a QECB in the past
b) Yes, we issued another type of bond before
c) No, we have no experience using bonds
d) Not sure

Case Study: Town of Gill

- Small rural community: 15 sq. miles with approximately 1,600 residents
- Participant in a regional procurement to solicit energy service companies for energy work
- The regional Gill Elementary School is shared by two communities, energy savings agreement was reached between the towns of Gill and Montague.



Unique Challenges:

- Historic buildings
- Oil heating
- Limited staff available to manage projects
- Limited funding
- No experience with issuing bonds

"This was our first adventure into the world of bonds"
– Ray Purington, Gill Adminstrator

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Case Study: Town of Gill (cont'd)

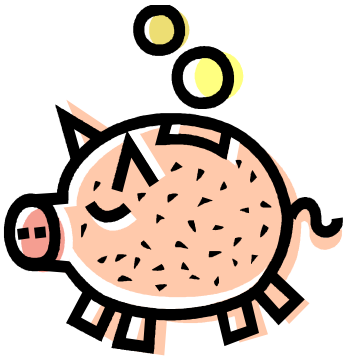
May 2011: $127,500 QECB awarded for an energy efficiency project totaling $275,484 at the Gill Elementary School

"For towns looking to sell a small bond (probably under $500,000), they should be prepared to do the work to find a buyer. I strongly suggest they network with small, local banks and investment advisors"
-Gill Administrator

QECB Details:

- Smallest QECB issued to date in MA
- Issued to small local bank, Greenfield Cooperative Bank
  - Bank takes tax credit in this scenario
- Bank receives a 4.96% tax-credit rate
- Gill pays interest to bank on the loan
- Gill opts to make deposits into a sinking fund for 17 years towards principal repayment at maturity (1% yield)
- High closing costs for smaller bonds, 10% of QECB
  - doesn't decrease proportionately for smaller bonds

Net interest cost of 1.26% to Gill over 17 years
Typical interest rates for energy performance contracts can range from 3.5-4.5% (15-20 yrs) without QECB

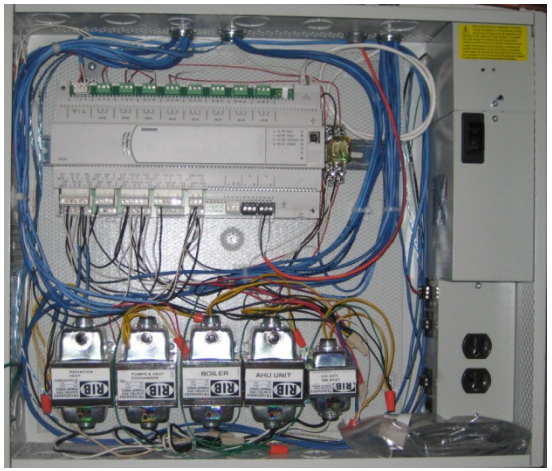


Case Study: Town of Gill (cont'd)

This energy project at Gill Elementary….

Consists of a boiler replacement, building envelope work, lighting upgrades, and the installation of an energy management system with online access for facilities staff

Yields approximately $11,200 in annual energy cost savings to the community



Will provide increased physical comfort and improve the quality of the school environment for the 135 Students from Gill and Montague

Allows this school to use at least 27% less energy by reducing oil and electricity consumption

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How to apply

- The next solicitation for QECBs will be posted on www.Comm-PASS.com within a few weeks.

→ There is approximately $15.5 million available for public projects in the next round (Round 3).

- Sign up to receive news and updates at the Green Communities website:
  www.mass.gov/energy/greencommunities

QECB Application Questions:

Elise.Avers@state.ma.us

(617) 626-7370

Q&A

THANK YOU!

- The webinar was recorded and will be available for viewing at your convenience on our website at:

  www.mass.gov/energy/greencommunities

- The slide presentation will also be posted at:

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